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Museums and Theaters Slowly Prepare to Reopen

At the beginning of June, as the general lockdown caused by the coronavirus enters its sixth month in the Eastern Hemisphere and third month in the Western, the vast majority of all cinemas worldwide, giant-screen and conventional, remain closed. Only about 50 screens in *LF Examiner's* database of 1,624 GS and IMAX theaters were open as this issue went to press in the last week of May, with the status of another 168 (mostly in China) unknown because of ambiguous or nonexistent Web sites.

That means that more than 1,400 GS and IMAX theaters – 87% of the world's total – remain closed, some of them since January, with few clear signs when they will reopen.

As we reported in the April issue, on March 23 a small number of Chinese multiplex theaters were allowed to reopen after being closed for two months. However, they were closed a few days later, in part because almost no one bought tickets. This could stand as a lesson on the risk of attempting to open before the public feels ready to gather in enclosed spaces with other people.

A few dozen multiplexes, mostly in Japan and Taiwan, have reopened in recent

months, and four standalone commercial GS theaters in the U.S. began welcoming visitors in May. Those four are the IMAX Theater at the **National Geographic Visitor Center at the Grand Canyon**, the **Yellowstone Giant Screen Theatre** in Montana, the MG 3D Theater at **Moody Gardens** in Galveston, TX, and **Branson's IMAX Entertainment Complex** in Branson, MO.

Bob Perkins, president of **Destination Cinema, Inc.**, which operates the Grand Canyon IMAX Theater and four other commercial GS theaters, tells *LFX* that “the Grand Canyon National Park has reopened for the past two weekends, for only a few hours each day. The theater has opened on limited hours to complement the park's hours. All protocols are in place; visitors are appreciative. We're seeing hundreds of visitors when we would normally see thousands. The visitors are happy that the travel restrictions are being lifted and the park is at least partially opened. However, many services are still not available.” He adds that he expects the **Niagara Falls IMAX** to reopen “ASAP,” and that DCI's other three theaters will open whenever their host institutions do.

Branson's **Randy Brashers** opened the retail and dining sections of his facility in mid-May, then opened the IMAX for the long Memorial Day weekend as an experiment. He was considering weekend-only screenings for the rest of the summer until tourism to the town rebounded. (We were unable to reach him again after the holiday, but the theater's Web site showed no future screenings as we went to press.)

According to our survey of Web sites, several museums in Asia reopened their buildings and GS theaters in mid to late

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Remembering 2005

A Pivotal Year in the Evolution of the Giant-Screen Industry

By *Emlyn Koster*

The theme of **Expo '70** in Osaka was “Progress and Harmony for Mankind.” Showing in its **Fuji Group** pavilion was *Tiger Child*, the world's first IMAX film. Directed by **Donald Brittain** and co-produced by **Roman Kroitor** and **Kichi Ichikawa**, this multi-image experience was a travelogue of the human spirit. With the giant-screen industry having evolved in many ways, including how the industry with its changing composition of theater types and film genres has been represented by a series of associations, this 50th anniversary year is an apt juncture for reflection.

This article looks back at the transformative steps taken by the business during February 2005, in Virginia Beach and then in Osaka, which paved the way for today's **Giant Screen Cinema Association**. Members and other stakeholders may be unaware that there was an adverse situation – one which had been brewing in the background but which abruptly surfaced – in need of resolution. With the vantage point as the last board president of the preceding Giant Screen Theater Association (GSTA), I reflect on the causal circumstances and how these were boldly addressed. Doing so also gives an opportunity to reiterate appreciation to others who were vital to those efforts. The key ingredients to our teamwork were a focus on the industry's changing needs and an inclusive approach involving board members with nonprofit, government, and for-profit backgrounds from Australia, Canada, Colombia, Japan, Mexico, the Netherlands

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Handling 3D Glasses in the Post-Pandemic World

by Paul Fraser

Boy, have we got a big To Do list, as every part of the GS industry plans for the theaters' re-opening!

Of the myriad operating details for theaters to consider, those with 3D have to think about the handling, and in particular the cleaning, of 3D glasses.

For those readers not involved in the operation of a 3D theater who may be thinking, "This doesn't affect me," reflect on it for a minute, especially if you're a producer or distributor. If we as an industry don't get this right (and maybe even if we do), the exhibition of 3D films at GS theaters could come to a screeching halt, not to be revived until auto-stereo technologies (glasses-free 3D) become a practical reality.

My own professional experience with 3D glasses in GS theaters, and guests' reactions to them, began in late 1986, when I assumed management responsibility of the world's first 3D IMAX theater, in Vancouver, Canada for my then-new employer, **Imax Systems Corporation**. In those early days of large-format 3D, we sourced the 3D glasses (the type with slender plastic frames) from the vendors that supplied the theme parks which showed smaller format 3D films. We knew we had to clean the glasses between uses; the restaurant-grade dishwasher became the vehicle. Some GS theaters still use this type of machine today. By the late 2000s, as 3D penetrated global cinema, new suppliers appeared with washing/drying machines specifically designed for 3D glasses. They offered (and still do) a variety of stainless-steel baskets, each customized for the a different model of 3D glasses.

For years, commercial multiplex theater operators (and a few museum GS theaters) have relied on their 3D vendor or projection system supplier to provide single-use 3D glasses that arrive in individually-sealed plastic envelopes. After just one use the 3D glasses are bundled up and sent back to the supplier who cleans those that are reusable and recycles those that are not. The suppliers' cleaning process uses washing/drying machines that are similar to those the individual theaters use.

The soap-and-water approach to cleaning 3D glasses has served theaters well for more than three decades.

In 2019, a project for a virtual reality client led me to explore best practices in cleaning VR headsets (aka head-mounted display or HMDs). With their

electronics, there's no way they could be cleaned by a version of an industrial dishwasher. Disinfecting wipes were the go-to cleaning method for many players in location-based VR. But even pre-COVID-19, I wasn't satisfied that this was the best approach. So I began researching other ways to clean the HMDs, and learned about ultraviolet-C light (UV-C) being used in cleaning equipment.

Then along came COVID-19. In its aftermath, theater operators will have to embrace new protocols and probably some new technologies for cleaning 3D glasses to assure the safety of the theater-going public.

UV-C, the "new" technology

UV-C is invisible light beyond the high end of the visible spectrum, with wavelengths of 100-280 nanometers (billionths of a meter). UV-C from the Sun doesn't reach us because the Earth's ozone layer absorbs it, so on the Earth's surface it is only produced artificially by lamps. UV-C light was first discovered over 200 years ago, and its effectiveness in killing bacteria was discovered in the late 1800s. By the 1960s UV-C was proven to disrupt DNA molecules, so UV-C devices started being deployed in hospitals to sterilize medical equipment. Water and air purification systems also use UV-C now. Some readers may even use it in their home's central air conditioning systems (as I do): a UV-C lightbulb in the air handling equipment zaps any nasty molds that might be in the air.

For those who wonder about safety, aside from it being a safe, well-established form of germicidal irradiation, UV-C light's short wavelengths cannot penetrate multiple layers of skin or the eyes. Far UV-C devices in particular are used because they are safe around exposed skin. ("Far" refers to the shorter UV-C wavelengths, 222 nm or less.)

When used in all sorts of devices, UV-C light has proven effective in killing all viruses, bacteria, and fungi. It works because UV-C disrupts the RNA strands of a pathogen, including previous coronaviruses. The consensus seems to be that there is no reason why the current novel coronavirus (SARS-CoV-2) should not also be neutralized by UV-C light.

UV-C disinfection equipment for 3D glasses is on the way. I predict a number of vendors will be jumping into this space. A vendor of a 3D glasses washer/dryer has developed a UV-C disinfection "box" that will begin shipping this summer. It looks like a small cabinet with drawers for wire baskets to hold

the 3D glasses. It only needs a small amount of floor space, proximity to an electrical outlet, and minimal staff training; it's practically "plug and play."

At least one supplier of UV-C disinfecting equipment for HMDs has had an independent lab test its equipment to prove it kills the earlier coronaviruses to the 99.99% effectiveness level. Suppliers of other UV-C disinfection devices for 3D glasses and HMDs would be wise to get lab tests done on the new coronavirus, and share that documentation with purchasers. At least two suppliers that I know of have plans to do so, while others I've contacted apparently hadn't thought of it before I called.

There is one shortcoming to using UV-C light: while it can reliably disinfect better than a washer/dryer, UV-C cannot remove oily smudges on lenses, or any debris that may be stuck to a surface. So it makes sense for a theater to keep its existing washer/dryer, and augment it with a UV-C device.

Back to the washer/dryer.

We've been told that thoroughly washing our hands with soap and water is a reliable way to remove viruses and bacteria from our skin. The 3D glasses washer/dryer uses warm water heated up to 120 degrees in some cases, combined with chemical or detergent solution.

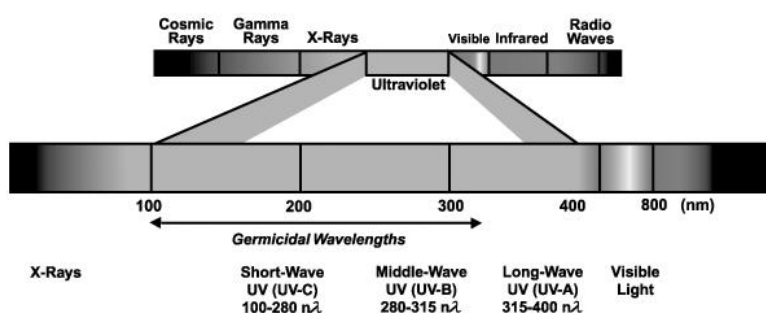
Is this not sufficient, without having to bother with a UV-C disinfecting device? Maybe. Maybe not. I honestly don't know. But I am fairly confident that the suppliers of these washing machines are *not* going to guarantee their effectiveness in killing viruses, like the new coronavirus, to the 99.99% level. Among other reasons, there is the potential for operator error (e.g., not enough or the right kind of detergent to neutralize the virus). Also, there may be some variation in the effects various soaps have on different viruses.

The new protocols

For good-hygiene reasons, from now on theater operators will have to ensure 1) that only their (now glove-wearing) hosts

or ushers hand the 3D glasses to each guest. No more help-yourself, with guests reaching into a rack of clean glasses. And 2) that hosts avoid handling the clean glasses until they are given to each guest.

Also, the distribution of 3D glasses to guests will have to be re-thought. Before the shutdown, a common approach was handing them to guests at the control point of the theater. This had the effect of creating a short-lived bottleneck, with people bunching up at the entrance. This won't fly with social-distancing guidelines. Theaters will need a plan for spacing out the distance between each person (or party) getting 3D glasses. One museum senior manager told me they're thinking of mov-



ing the handing out of glasses to the concession stand.

As an aside, what about the rest of the theater? The seats, the arm rests, all the touchpoints? Yikes! Are there other types of UV-C devices that can be put to use? There are. Theater operators are beginning to look at Far UV-C wands that can be waved over all types of surfaces, including seats with cloth upholstery, to effectively and safely neutralize any viruses or other pathogens.

While UV-C cleaning devices should be an effective solution for theaters going forward, and are superior to a water-based, wash-only approach, theater guests need to know about them and be convinced that they are genuinely effective at killing all the bugs, especially the novel coronavirus. A few of my theater clients told me recently that pre-COVID-19, they only rarely got questions about how the 3D glasses were cleaned. Want to bet this becomes the first question people ask at the ticket counter about films offered in 3D?

This brings me to the concept of "hygiene theater," especially with respect

to cleaning 3D glasses. That is, making a show out of whatever you do to clean and disinfect 3D glasses (and the auditorium too, for that matter).

Two of my theater clients are producing videos of their glasses washers/dryers in use, making it a part of the in-theater pre-show, or for display near the auditorium entrance. If a UV-C disinfection box is added, it could be placed near the auditorium entrance with a tent card that explains, with easy-to-understand graphics, what's going on. It seems to me that the science behind how and why UV-C works is a perfect fit for science museums. Ideally, early UV-C boxes for 3D glasses will have designs that make them look attractive, or even "cool." It wouldn't be bad idea if their very presence causes guests to engage in a discussion with theater staff about it.

With all the new measures, we're still faced with some uncertainty. Will the public accept the new cleaning approaches? Will 3D still be operationally worthwhile? As

three theater clients told me, if dealing with 3D glasses becomes too much of a hassle, or guests shy away from it, they'll just stop showing 3D. That's quite understandable, but it would be a shame. Hopefully, it would only be a temporary measure. While interest in the Hollywood and multiplex approach to 3D has waned in recent years, the GS industry has led the way in great 3D for more than 30 years. It has been a good marriage: the realism of a GS documentary combined with the technical excellence of 3D production and GS exhibition. I, for one, would like to see it continue.

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lands, Sweden, the UK, and the US.

This article also leverages the case of this industry's evolution into an illustration of how any nonprofit organization should periodically consider changes aimed at strengthening its relevance and sustainability. According to the National Center for Charitable Statistics and to Nonprofit Action, there are more than 1.5 million nonprofits in the US and some 10 million worldwide. Every nonprofit organization requires a board. Mindful that the landscape of nonprofit practices is always evolving and that the readership of this article includes past, present, and future GSCA board members, as well as other nonprofit board members, the concluding comments may offer some valuable food for thought.

My first IMAX experiences were at **Ontario Place** in Toronto, before I became the CEO of the nearby **Ontario Science Centre** in 1991. Sister agencies in the Ontario Government, the Ontario Science Centre and **Science North** in Sudbury launched campaigns to add a flat screen IMAX theater and a dome screen IMAX theater, respectively, to their capital expansion plans and as flagships for the Toronto-based **Imax Corporation**.

Appointed CEO of **Liberty Science Center** in New Jersey in 1996, which had opened in 1993 with an IMAX Dome theater and with grants from the **National Science Foundation**, I pursued my interest in the greater lifelong learning potential of giant-screen experiences. Symposia preceding GSTA's conference in New York City/Jersey City in 1999 and GSTA's conference in Jersey City in 2008 were fully subscribed. (The 2008 proceedings remain available in the Member Center of the GSCA's Web site, giantscreencinema.com.) Also, I was thrilled to be part of an advisory team with director **Soames Summerhays** for the GS film ***Ocean Oasis*** (2000), and to engage Liberty Science Center's featured experience team in audience evaluations for **Stephen Low's** ***Volcanoes of the Deep Sea*** (2003) with fellow geologists **Richard Lutz** and **Peter Rona** from **Rutgers University**.

Intertwined with those opportunities was deep enthusiasm for giant-screen expe-

riences of a documentary nature that transported the minds of audiences to other places and times. Riveting examples were leaving Earth's atmosphere in Imax's ***The Dream is Alive*** (1985); the ballet scene in **MacGillivray Freeman's** ***To the Limit*** (1989); the tragedy of ***Fires of Kuwait*** (1992); the vistas of **George Casey's** ***Africa, The Serengeti*** (1994); **Sting's** soundtrack for ***The Living Sea*** (1995); the suspense in ***Everest*** (1998); the mother's emotions in BBC's ***The Human Body*** (2001); **National Geographic's** re-enactment in ***Lewis and Clark, Great Journey West*** (2002); and the



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delving into a life in ***Van Gogh, Brush with Genius*** (2009). These and many others remain vivid memories.

1971-2004

Inspired by the success of the pioneering giant-screen experience at Osaka, the first permanent IMAX and OMNIMAX theaters opened at Ontario Place in 1971 and the **Reuben Fleet Science Center** in 1973. With a mission to advance the educational use of the world's largest film format, the industry's first association formed in 1977 as the Space Theater Consortium (STC) and became the International Space Theater Consortium (ISTC) in 1993. Imax premiered IMAX 3D at Canada's **Expo 86** in Vancouver with its "Transportation and Communication, World in Motion, World in Touch" theme. Then the four IMAX theater sys-

tems — flat screen, 3D, Magic Carpet (two screens, one in front, one below, with Plexiglas windows under viewers' feet), and Solido (IMAX 3D in a dome) — became features at the **Futuroscope** theme park in Poitiers, France, that opened in 1987. They were also featured at **Expo '90** in Osaka with its theme of "Harmonious Coexistence of Nature and Mankind."

In the winter 1996 issue of ***The Big Frame***, the ISTC's quarterly publication, president **Mike Day** reported that membership had grown 30% over the previous year, and included institutions from 26 countries.

As *LF Examiner* reported in February 2006, the **Large Format Cinema Association** (LFCA)

...was founded at the ISTC conference in Barcelona in 1996 by a group of associate members frustrated by their second-class status in the organization, despite paying the same dues and constituting a majority of the membership.... The group held its first conference the following year, immediately following the ISTC meeting in Vancouver, and quickly became a voice for the production side of the LF industry. LFCA's mission was to promote international public awareness of large-screen entertainment formats, provide a forum for sharing information among 70mm filmmakers, suppliers, manufacturers, distributors, theaters and their support industry, and foster the growth of the large-screen entertainment industry through encouraging product availability, technical standards of quality, and other activities as deemed appropriate by the Board of Directors.

In the summer 1998 issue of ***The Big Frame***, ISTC president **Jeff Kirsch** reported on an ISTC board retreat that May in San Diego. He opined that 15/70 film screenings at LFCA and at conferences of the **Association of Science-Technology Centers** were complementary to ISTC's screenings. Looking back at the summary of that planning, it stands out that its strength/weakness/opportunity/threat analysis drew attention to competition, fragmentation, and an unclear market position.

A new name, the Giant Screen Theater

Association, and a new mission — “The global forum for the development and presentation of entertaining giant-screen film experiences for lifelong learning” — were proposed. Formalized during the ISTC conference in Sydney later in 1998, these were in effect at GSTA’s first International Conference and Trade Show in New York City the next year. On Sept. 15, 1999, the *New York Times* reported, “The convention ... has attracted 1,000 delegates, conservatively dressed, eminently civil, and concerned about the future of a medium that has recently taken off commercially.”

Delving into the new mission statement in the fall 2001 issue of *The Big Frame*, I opined that GSTA’s strategic planning is guided mostly by pressing issues: “Perhaps, over the next few years, after further debate about the meaning and pursuit of GSTA’s mission, it will become possible for GSTA’s core of theater members to collectively express a vision of a desirable future state of the giant-screen film industry.”

Between 1999 and 2003, GSTA and LFCA co-existed with their education and entertainment emphases, albeit with growing sideline conversations about the desirability, and in some quarters, the inevitability, of the two associations — with overlapping memberships, two websites, two boards, and often screening the same films only a few months apart — becoming one. However, with an adequate flow of new films and many mission-related matters to discuss, GSTA’s Mid-Winter Meetings, in venues such as Stockholm and Valencia, and fall conferences, in venues such as Frankfurt and Glasgow, were vibrant events.

GSTA’s 2004 conference in Montreal became a tipping point. The good news was the screening of nine new films; the bad news was an unexpectedly low local registration and a resulting \$250,000 drop

in its cash reserves. Meanwhile, the plan to hold the 2005 International Conference and Trade Show in Osaka, which had been decided in 2002 because of the commemorative tie to the 1970 Expo, was retained even as GSTA decided to reduce the frequency of its international meetings from every other year to every third year. In November 2004, I attended the **Japan Space Theater Convention** in Tokyo, attended by 26 theaters, to invite that country’s giant-screen industry to a joint meeting with GSTA in Osaka.

2005

Concerns came to a head at GSTA’s Mid-Winter Meeting in Virginia Beach, Feb. 3–5, 2005. Such was the suddenness that in my first column as incoming

comparable with ones to Europe.

As *LF Examiner* reported in “GSTA Confronts Problems, Begins Big Changes” in the February 2005 issue, “the 70 members who had assembled in Virginia Beach to plan the fall conference had no advance notice of the situation.” In the same issue, LFCA president **Andy Gellis** wrote, “The business clearly needs unification, but are the constituents willing to be unified?”

Underpinning GSTA’s review of the Osaka conference plan in Virginia Beach in the presence of several industry members from Japan was the need for an astute mix of candor and diplomacy. Key in this regard was GSTA’s board member from **Dentsu Tec** in Japan, **Kazuyo Takehara**. In the spirit of openness, GSTA’s board opted to hold its second meeting on a theater

stage in full view of attending members. (See “An Amazing Meeting,” February 2005.) Straightforward initial decisions were to relocate GSTA’s headquarters from Saint Paul, MN, to free space at the **Saint Louis Science Center**, where GSTA’s new executive director, **Gretchen Jaspering**, had just left a position, and to end the contract with the **Science Museum of Minnesota** for publication of *The*



The GSTA board holds an unprecedented open meeting at its Mid-Winter meeting in February 2005.

GSTA president in the winter 2005 issue of *The Big Frame*, entitled “The Power of the Giant Screen Phenomenon,” I anticipated that “GSTA’s 2005 International Conference and Trade Show will be the perfect time and place to probe the inspirational role of expos in our industry’s evolution ... Early registration is strongly recommended.”

Additional stress in Virginia Beach was news that only one new film was scheduled to open between LFCA’s spring conference and GSTA’s fall conference and that a new GSTA member survey showed that most respondents were not planning to travel to Japan, despite information that advance-booked airfares to there were

Big Frame to enable consideration of new options.

Concerning the Osaka plan, as *LF Examiner* noted, 85% of the board voted in favor of reconvening within 10 to 14 days to review the new financial information and the Osaka decision. Immediately following Mid-Winter Meeting, LFCA’s board voted unanimously “to explore a closer association with the GSTA for the potential benefit of the entire spectrum of the large-format industry.”

On Saturday, Feb. 19, I hosted a meeting of GSTA’s board at Liberty Science Center: 16 of its 20 members participated in person or by teleconference. Three

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hours of deliberations concluded with a decision that I travel to Japan to convey GSTA's decision to relocate the fall conference from Osaka to Boston, which had just offered to become the host venue, with a profound apology for the awkwardness of this decision and with the intent to offer conciliatory measures to attract delegates. Although I had been to Japan for several previous business trips, on this occasion I consulted Imax's **David** and **Patricia Keighley** to get the benefit of their industry-specific experience there. Their recommendations: exude decorum, meet leader to leader, present the facts, and respond with understanding.

My trip to join Takehara-san in Tokyo and Osaka took place on Feb. 21–23. She and I have recently reviewed our vivid memories of that 18-hour period of unforgettable experiences. As I reviewed my file of articles in *The Big Frame* and *LF Examiner*, GSTA and LFCA board updates, other pertinent documents, and trip mementoes — including a welcome note from

Ken Yokoyama, general manager of the Hyatt Regency Osaka — it was evident that we anticipated that the Virginia Beach and Osaka moments would remain significant. (We also agreed that I should ask editor James Hyder if *LF Examiner* would be interested in a recap article: we thank him for immediate enthusiasm.)

Adding to the stress of that trip was that **Oh-gata**, Japan's giant-screen industry association, the Hyatt Regency, and **Suntory Museum** in Osaka, were all unaware of the circumstances behind our rapidly scheduled visit. Less than a year before, we had visited them to preview conference facilities and to sign contracts. The first appointment was with several Oh-gata executives. Despite their surprise and disappointment, they understood that GSTA's financial situation could not risk a deficit from the Osaka conference. We informed them that we were going to Osaka that evening.

From the bus connecting Osaka's Kansai Airport with the Hyatt Regency, Takehara-san notified

pause that seemed longer than it probably was, and with both of us clearly tense, the reply was an assurance that Yokoyama-san would profoundly appreciate our visit, understand its reasons, and that I should continue to enjoy the suite. With a deep sense of reverence, we lingered over another drink, reviewed the big picture, reiterated our gratitude, and confirmed that we would meet with the general manager the next afternoon.

The next morning, we were greeted by the planning team at the entrance of the Suntory Museum and led to a conference room. Our faces probably suggested that our news was unfavorable, and the atmosphere was tense as Takehara-san and I explained the visit and answered questions. The younger staffers were tearful, and the sadness of the IMAX projectionist, **Kunihiko Fujimoto**, who had projected *Tiger Child* at Expo '70, was clear. With an allusion to concluding remarks about Japan's culture in *The Last Samurai*, the meeting ended in a calm silence of respectful bows and we left the museum.

Back at the Hyatt Regency, it was time to meet with Yokoyama-san. Over tea in a private lounge, he reiterated the reaction his assistant had anticipated the previous evening. Via Takehara-san, I expressed GSTA's profound appreciation for his termination of its contract without any penalty. The unhurried serene atmosphere — extraordinary given the circumstances — left me in awe. Indeed, the whole experience of undoing GSTA's plan to reconvene the giant-screen industry in the city where it had all begun 35 years earlier filled our conversation on the flight back to Tokyo, as well as my mind as I continued the journey back home.

Between March and September, the GSTA-LFCA unification talks progressed and were remarkably uncontroversial. The two boards were completely involved and members were kept informed. In the April 19, 2005, issue of *Film Journal International*, **Judith Rubin** reported that "the two biggest trade associations are planning to get hitched ... industry leaders foresee good things in the proposed union." As I noted in the Summer 2005 issue of *The Big Frame*, the unification committee "has, with good reason, not allowed the

Unification Timeline of the Giant-Screen Industry

2005

Winter	<i>The Big Frame</i> : "The Power of the Giant Screen Phenomenon"
Feb. 3–5	GSTA Mid-Winter Meeting, Virginia Beach
Feb. 7	GSTA board teleconference
Feb. 11	GSTA worldwide membership update
Feb. 19	GSTA board teleconference
Feb. 22	LFCA board teleconference
Feb. 22–23	Apologies to Oh-Gata, Suntory Museum, and Osaka Hyatt Regency, Japan
Feb. 25	<i>LF Examiner</i> news flash; GSTA moves conference from Osaka to Boston
March 8	Formation of GSTA-LFCA unification committee
March 22	GSTA board teleconference and GSTA worldwide membership update
March 31	GSTA-LFCA unification committee teleconference
April 8	GSTA board executive teleconference
Spring	<i>The Big Frame</i> : "Looking Back, Taking Stock, Looking Ahead"
April 22	GSTA-LFCA unification committee teleconference
April 26–29	Final LFCA Conference and Film Festival with member meetings, L.A.
April 28	GSTA board meeting/teleconference
May 9	GSTA worldwide membership update
Summer	<i>The Big Frame</i> : "Taking Stock (Part II)," "Looking Ahead (Part II)"
June 24	GSTA-LFCA unification committee meeting, Dallas
Aug. 2	GSTA-LFCA unification committee teleconference
Aug. 5, 8	GSTA board teleconference
Sept. 10	GSTA worldwide membership update
Sept. 19–23	Final GSTA Conference and Trade Show with member meetings, Boston
Sept. 21	GSTA-LFCA update memberships on unification
Sept. 22	GSTA-LFCA unification committee meeting
Fall	<i>The Big Frame</i> : "Imagine"
Nov. 18	GSTA-LFCA update memberships on unified association

2006

Jan. 1	GSTA-LFCA unification committee becomes interim GSCA board
March 29–31	Inaugural GSCA Conference, Los Angeles
Summer	<i>The Big Frame</i> : "From Unification to Unity"
Sept. 18–20	Inaugural GSCA International Conference and Trade Show, Galveston

use of the merger word because that implies a winner and a loser.” GSTA and LFCA split the cost, a surprisingly modest one, of the unification: the bill for general counsel Mike Laddin from LeaderPoint in Kansas City was \$2,200 and the bill for legal and tax advice from the Stolar Partnership in St. Louis was kept under \$10,000.

By the fall of 2005, LFCA’s and GSTA’s last conferences had taken place in Los Angeles and Boston. In Boston during the awards evening, there was an extremely touching moment when Fujimoto-san, the Expo ’70 IMAX projectionist, rose to speak. As *LF Examiner* noted (October 2005), after accepting a memento of appreciation from me on the industry’s behalf, he said: “People of the company called Imax and the company called Suntory have always treated me warmly, and this fact will definitively stay in my heart forever.”

On Jan. 1, 2006, the new Giant Screen Cinema Association came into being with a mission to “facilitate communication, information sharing, and the development of best practices to support the production and exhibition of original, high-quality, educational and entertaining giant-screen experiences.” In the Summer 2006 edition of *Film Journal International*, Rubin summed up the outcome with the headline “In Unity, there is Giant Screen Strength.” As GSCA’s first board chair, Andy Gellis aptly titled his column in the last issue of *The Big Frame*, “From Unification to Unity.”

Widening the Lens

The front cover blurb to *Race for Relevance* published in 2011 by the Center for Association Leadership (now the American Society of Association Executives) states: “Associations today face intense pressures that threaten their continued relevance.... Gone are the days when members would automatically renew. Today, individuals expect value in return for membership.... Yet many associations operate the same way they have for years.”

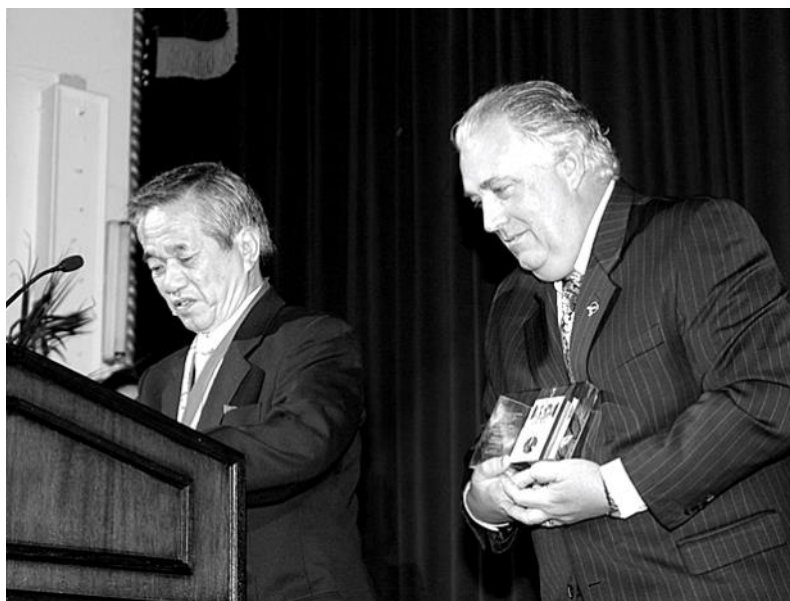
The history of the giant-screen industry is instructive. As soon as there was a critical mass of theaters and films following the inspiration of a new projection tech-

nology and cinema experience at the Expo ’70, a U.S.-based association (S T C) formed in 1977. As this network grew, a global association (I S T C) formed in 1993. As it further expanded with wider needs, a new association formed in 1996 (LFCA) as an

offshoot that, in turn, led to the 1993 association reconfiguring itself (GSTA) in 1999. Then, as the industry’s initial focus on museum-only theaters and education-only films faded into a memory with increasing GSTA-LFCA overlap, a unified industry-wide association (GSCA) arose in 2005. This summary serves to highlight the significance of that year in the half-century history of the giant-screen industry which has evolved from one association, to two associations, each with a differing mission, and back to one association. This history also offers a clear lesson about how an organization needs to remain in close touch with its surrounding circumstances and be prepared to confront new challenges and opportunities.

A booklet of the National Center for Nonprofit Boards in 1995 had an eye-catching title: “Nonprofit Mergers, the Board’s Responsibility to Consider the Unthinkable.” The 1996 sequel was titled “Seven Steps to a Successful Nonprofit Merger.”

Precipitated by a financial crisis, new technologies, a changing landscape with new players, and new opportunities, a nonprofit may opt to combine in whole or in part with another. The results are foreseen to be greater efficiency that includes prospects for growth, the end of duplication, and perhaps even survival. The Phoe-



Kunihiro Fujimoto, IMAX projectionist at the Suntory Museum in Osaka, received a memento of appreciation from Emyln Koster at the GSTA’s last conference in Boston in September 2005.

nix-based Lodestar Foundation specializes in nonprofit collaborations by supporting “those nonprofits that have made the joint decision to explore and/or implement permanent relationships ... long-term collaborations in all forms, ranging from joint programming to administrative consolidations (sharing office space and/or services) to mergers and acquisitions to associations and confederations.” As “Nonprofit Mergers” states, “Going well beyond collaboration, a merger joins two agendas, two missions, two souls, and consolidates two balance sheets.”

The “Seven Steps” are:

1. Get to know your partner;
2. Form a merger committee;
3. Choose the chief executive and the organization’s name;
4. Structure the new entity;
5. Encourage acceptance through effective communication;
6. Write a merger agreement; and
7. Implement and evaluate the merger.

Thankfully, it was unnecessary for GSTA and LFCA to cogitate in any lengthy way about these steps. Everyone was wholeheartedly committed to a win-win, more-than-the-sum-of-the-parts, outcome. The axiom “where there’s a will, there’s a way” steadfastly applied. As *The Nonprofit Times* noted in a 2016 article

(see **KOSTER** on page 13)



* New listing.

All films are 3D unless noted; underlined titles are 2D.

Updated information is printed in **bold**.

Unless noted, all films run about 40 minutes.

Tenet

Syncope; distributor: Warner Bros.; director, writer: Christopher Nolan; producers: Christopher Nolan, Emma Thomas; DP: Hoyte Van Hoytema; score: Ludwig Göransson; executive producer: Thomas Hayslip. Cast: John David Washington, Michael Caine, Kenneth Branagh, Robert Pattinson. 2D. Release: July 17.

Astronaut: Ocean to Orbit

Oceanic Research Group; distributor: MacGillivray Freeman Films; director: Jonathan Bird; producer: Art Cohen; DP: Jonathan Bird; script: Jonathan Bird, Art Cohen; score: Bruce Zimmerman; executive producers: Christine Bird, Greg Von Hausch. Cast: Astronauts Chris Cassidy, Jeanette Epps. Running time: 20 minutes. Release: September 2020.

- 95% of principal photography has been completed.
- May-June: remaining photography will be shot.
- Entirely shot for dome compatibility.

Angkor: Lost Empire of Cambodia (wt)

Definition Films, Helio Projects Asia; distributor: K2 Studios; director: Murray Pope; producers: Christopher Zaryc, David Gross, Murray Pope; DP: Earle Dresner; script: Murray Pope, Paul Phelan; executive producers: Ed Capelle, Mark Kresser, Nick Robinson, Kulikar Sotho, John Weiley. Release: 2020.

- Principal photography is complete, post-production is under way.

America's Arctic

Terra Mater Factual Studios; distributor: Cosmic Picture Distribution; directors: Myles Connolly, Florian Schulz; producers: Wolfgang Knöpfler, Walter Köhler; DP: Florian Schulz; script: Myles Connolly, Florian Schulz; score: Alex Heffes. Release: 2020.

- Filmed in the Arctic National Wildlife Refuge from 2014–2019.
- Principal photography is complete, post-production is under way.

Antarctica: Into the Unknown

BBC Studios Natural History Unit; distributor: SK Films; director: Fredi Devas; producers: Jonny Keeling, Myles Connolly; script: Fredi Devas, Jonny

Keeling; score: Jacob Shea; executive producer: Jonathan Williams. Release: 2020.

Artemis: Beginning of a New Era (wt)

Afterglow Studios; distributor tba; director: Luke Ployhar, producers: Luke Ployhar, Ashley Jahnke; script: Scott Pearson. Release: 2020.

Asteroid Hunters (formerly Asteroid Impact)

Imax Corporation, Huahuang Pictures; distributor: Imax Corporation; director: W.D. Hogan; producers: Jini Durr, Phil Groves; DP: Sean MacLeod Phillips; script: Phil Groves; executive producers: Anna Chi, Phil Groves. Cast: Marina Brozovic, Mark B. Boslough, Kelly Fast, Nahum Melamed. Release: 2020.

- Principal photography is complete, post-production is under way.

Dino Dana: The Movie

Sinking Ship Entertainment; distributor: Sinking Ship Entertainment; director: J.J. Johnson; producers: Eric Beldowski, Blair Powers, Christin Simms, Matthew J.R. Bishop; DP: George Lajtai CSC; script: J.J. Johnson, Christin Simms; score: Michael-Paul Ella; executive producers: J.J. Johnson, Blair Powers, Christin Simms, Matthew J.R. Bishop. Cast: Michaela Luci, Saara Chaudry, Nicola Correia-Damude, Amish Patel. 2D. 30 minutes. Release: 2020.

- A shorter version is being prepared.

Mars 1001

Mirage 3D; distributor: K2 Studios; director, writer: Robin Sip; DP: Christiaan Wouda; score: Mark Slater. Cast: Miles O'Brien. Release: 2020.

Ocean Currents (wt)

Wild Pacific Media, Definition Films; distributor: K2 Studios; director: Nick Robinson; producers: Nick Robinson, Electra Manikakis, Peta Ayers; DPs: Nick Robinson, Jonathan Shaw ACS, Caspar Mazzotti; script: Nick Robinson, Peta Ayers; score: Hylton Mowday; executive producers: David Gross, Electra Manikakis, Nick Robinson. Cast: Silvia Earl. Release: 2020.

Snow (wt)

Saint Thomas Productions, nWave Pictures; distributor: nWave Pictures Distribution; directors: Jacqueline Farmer, Cyril Barbançon; producers: Jacqueline Farmer, Cyril Barbançon, Eric Dillens; DP: Cyril Barbançon; script: Jacqueline Farmer, Cyril Barbançon, Philippe Chappuis, Andy Byatt; executive producers: Jacqueline Farmer, Cyril Barbançon, Eric Dillens. Release: 2020.

- Principal photography is complete, post-production is under way.

Tiger. Tiger

White Mountain Films, Kennedy/Marshall Company, Imax Corporation; distributor: Imax Corporation; director: George Butler; producers: George Butler, Keero Birla, Caroline Alexander; DPs: Reed Smoot, Tom Hurwitz; script: Caroline Alexander; score: Mark Kilian; executive producers: Julian Robertson, Frank Marshall. Cast: Dr. Alan Rabinowitz. 2D. Release: 2020.

Apr '20

Jul '20

Jan '21

Tenet

AOTO

AmArct AstHun OceCur
Angkor AITU Artem DinDan Snow
Mars Tiger TrainT

- Principal photography is complete, post-production is under way.

Train Time

Stephen Low Company; distributor: Stephen Low Company; director, script: Stephen Low; producers: Pietro Serapiglia, Stephen Low; executive producer: Paul Globus. 2D. Release: 2020.

- Film is complete.

Everest: The Director's Cut

MacGillivray Freeman Films; distributor: MacGillivray Freeman Films; directors: Greg MacGillivray, David Breashears, Steve Judson; producers: Steve Judson, Alec Lorimore, Greg MacGillivray; DP: David Breashears; script: Tim Cahill, Steve Judson; score: Daniel May, Steve Wood. Narrator: Liam Neeson. Cast: Araceli Segara, Jamling Tenzing Norgay, Ed Viesturs. 2D. Release: February 2021.

- The original 15/65 footage is being scanned at 16K resolution.
- New material will be added.
- The film will be released in 8K resolution.

Ireland

MacGillivray Freeman Films; distributor: MacGillivray Freeman Films; director: Greg MacGillivray; producer: Shaun MacGillivray. Release: February, 2021.

- Principal photography is complete, post-production is under way.

Serengeti

K2 Studios; distributor: K2 Studios; director: Michael Dalton-Smith; producers: Michael Dalton-Smith, David Gross; script: Michael Dalton-Smith, Karen Gordon; executive producers: David Gross, Mark Kresser, Michael Dalton-Smith. Release: March 2021.

Secrets of the Sea

Howard Hall Productions, Oceanic Research Group; distributor: tba; directors: Howard Hall, Jonathan Bird; producers: Michele Hall, Christine Bird; DPs: Howard Hall, Jonathan Bird; script: Howard Hall; score: Bruce Zimmerman, Alan Williams; executive producers: Michele Hall, Christine Bird. Release: Spring 2021.

- Shooting planned for the Bahamas this spring has been canceled.
- Shooting in New England and eastern Canada will proceed as planned.
- West coast shooting will resume when lockdown has ended.
- Release may be delayed to prevent competition with *Ancient Caves*.

Wings Over Water (formerly Wings 3D)

Dorsey Pictures, Archipelago Films; distributor: SK Films; directors: producers, script: Andrew Young, Susan Todd; DP: Andrew Young; executive producer: Chris Dorsey, Charlie S. Potter. Release: Spring 2021

- March: Filmed landscapes and great horned owl in North Dakota and Wisconsin.
- April: North Carolina, mallards, sand hill cranes.

EverDC Sereng
SOTS
WOW

Ireland
CoolCi
NewEng

EIU

FormE
JTTGMR
SharkHe

FireFi

- May: Bison ranchers in North Dakota (while maintaining social distancing).
- Summer: Aerials with birds, post work starts.

Cool Cities (wt)

K2 Studios; distributor: K2 Studios; director: Nick Robinson; producer: David Gross; executive producers: Robert Kresser, Mark Kresser, Mark Krenzien, David Gross. Cast: Tim Jarvis. Release: May 2021.

New England and the Sea of Stories (wt)

Cosmic Picture; distributor: Museum of Science, Boston; director: Daniel Ferguson; producer: Taran Davies; script: Daniel Ferguson; DP: Reed Smoot. 2D. Release: May 2021.

- Filming, originally planned to start in April, has been put on hold.

Einstein's Incredible Universe (wt)

Cosmic Picture; distributor: tba; director: Daniel Ferguson; producers: Taran Davies, George Duffield, Daniel Ferguson; script: Daniel Ferguson, Mose Richards; DP: Reed Smoot. Release: Fall 2021.

Formula E: Racing to the Future

Producer/distributor: tba; director, DP: Peter Chang. Release: 2021.

Journey to the Great Mayan Reef

Milbrand Cinema; distributor: tba; director, producer, DP: Lance Milbrand; editor: Dave Choice; score: Icarus Music. Cast: Kathleen Dudzinski, Eldon Bolton. Release: 2021.

Principal photography is complete.

Shark Heroes (wt)

Definition Films; distributor: K2 Studios; director, writer: Amelia McCarten; producer: David Gross; DP: Jonathan Shaw ACS; executive producer: Mark Kresser. Release: 2021.

Fire Fighters

Sean Casey Productions; distributor: tba; director, DP: Sean Casey. 2D. Release: 2022.

- Shooting in Southern California began last fall and continued through January.
- Will be filming this fire season with the added pressure of the coronavirus affecting the fire service community.

DMR FILMS:

Title	Dist	Release
Mulan	WDP	7/24/20
Wonder Woman 1984	WB	8/14/20
A Quiet Place Part II	PAR	9/4/20
The King's Man	FOX	9/18/20
Black Widow	WDP	11/6/20
No Time to Die	MGM	11/25/20
Dune	WB	12/18/20
Top Gun: Maverick	PAR	12/23/20
Eternals	Sony	2/12/21
F9	UP	4/2/21
Shang-Chi	WDP	5/7/21
Jurassic World 3	UP	6/11/21
Venom: Let There Be...	Sony	6/25/21
The Batman	WB	10/1/21
Spider-Man (untitled)	WDP	11/5/21
Mission: Impossible 7	PAR	11/19/21
Avatar 2	FOX	12/17/21
Thor: Love and Thunder	WDP	2/11/22
Doctor Strange	WDP	3/25/22
Fast & Furious 10	UP	4/2/22
Indiana Jones (untitled)	WDP	7/29/22



L to r: Director Greg MacGillivray, AC Rob Walker, and cast members Noah Snyder and Osama Kheireddine, filming at the Cliffs of Moher for Ireland.

(from COVID on page 1)

May. They include four in Japan: **Science Museum, Osaka**; **Koriyama Municipal Science Museum**; **Kagoshima Municipal Science Center**; and **Fukuoka Science Museum**. Others include the **National Science Museum** in Daejeon, South Korea, and Taiwan's **National Museum of Marine Science & Technology**.

The Pennington Planetarium at the **Louisiana Art & Science Museum** in Baton Rouge has scheduled a pilot reopening program for Saturday, May 30, with a live star talk, a fulldome show, and a screening of **MacGillivray Freeman's America's Musical Journey** on its 60-foot (18.3-meter) **Sky-Skan** dome. Ticket sales were limited to 42 of the theater's 150 seats, and the price included parking in the building's staff lot. The \$15 tickets sold out in four days. The experience

gained from the event will help the museum plan its reopening process.

The only other institutional GS theater in North America to reopen by the end of May is the 114-seat **Carey Digital Dome** in the **Kansas Cosmosphere and Space Center** in Hutchinson, KS. According to public relations coordinator **Carla Stanfield**, about 400 people visited the museum over the three-day Memorial Day weekend, with "200+ folks just for films in our 4K digital dome theater. Compared to 600+ [in the theater for Memorial Day weekend] in 2019, it may seem like a large drop, but in our current environment, we felt this weekend was a success, showing that visitors are looking for fun family activities and that Cosmosphere can be one of those places to provide it."

Major museums and institutions such as zoos, with large indoor and outdoor spac-

es, can more easily implement social distancing procedures. Nineteen such institutions have reopened their buildings, but not their GS theaters. They are:

Ontario Place, Toronto, ON, Canada
Chongqing Science and Technology Museum, China
Guangdong Science Center, Guangzhou, China
Hangzhou Low Carbon Science & Technology Museum, China
Shanghai Science & Technology Museum, China
China Science and Technology Museum, Beijing, China
Tianjin Science & Technology Museum, China
Technik Museum Sinsheim, Germany
Technik Museum Speyer, Germany
Eugenides Planetarium, Athens, Greece
Toyohashi Museum of Natural History, Japan
Swiss Transport Museum, Lucerne, Switzerland
Houston Museum of Natural Science, TX
North American Museum of Ancient Life, Lehi, UT
Putnam Museum and Science Center, Davenport, IA
U.S. Space & Rocket Center, Huntsville, AL
Washington Pavilion of Arts and Sciences, Sioux Falls, SD
World Golf Hall of Fame, Saint Augustine, FL

One of the earliest and most prominent museums to reopen is the **Houston Museum of Natural Science**. The museum features a 395-seat digital GS theater and a 50-foot (15.2-meter) fulldome theater, both of which remained closed when the building reopened on May 15. With nearly 500,000 square feet (46,000 square meters) of exhibit space, the facility's capacity is about 4,000 visitors.

According to **Latha Thomas**, SVP of marketing, on reopening, admissions were limited to 1,000 at any one time, or 25% of total capacity. She reports that after the first week they are averaging about 75% of that reduced total.

As for the safety precautions implemented, she says, "The museum requires all visitors [ten years of age] and up to wear masks. We also installed many more hand sanitizer stations throughout the museum. There are plexi shields installed at our box office and lots of signage to remind patrons to socially distance at six feet at all times, including [in] the elevators. We also have staff constantly cleaning the museum throughout the day. High-touch areas such as handrails, elevator buttons, etc., are

COSMOSPHERE CORONAVIRUS SAFETY PLAN

STAFF + VISITOR SAFETY

- All Cosmosphere front line staff and volunteers will be required to wear a mask during their shifts when they are in public areas
- Visitors are encouraged to wear a mask. Disposable masks will be available at the Box Office upon request
- Staff/volunteers at retail points of sale will be required to wear gloves
- A temporary plexiglass shield will be installed at all retail points of sale

CONTACTLESS PAY

- Online and phone sales are encouraged
- Purchase tickets online at cosmo.org/visit/tickets or call 620.665.9312

HAND SANITIZER

- Hand sanitizer stations will be readily available on all floors of the Cosmosphere

SOCIAL DISTANCING

- There will be 6 foot markers on the floor at the Cosmosphere Box Office, Gift Store, Café, and outside all venues indicating social distance for visitors
- Visitors will be asked to adhere to social distancing guidelines for space between themselves and other visitor groups

THEATER DISTANCING

- Seating in the Digital Dome Theater, the Planetarium and Dr. Goddard's Lab will be limited
- Every other row in these venues will be unoccupied

DISTINEFFECT + SANITIZE

- All high-traffic, hard/non-porous materials and more will be sanitized daily or multiple times during the day, including:
 - surfaces • railings • tables • doorknobs
 - light switches • countertops • handles
 - disks • phones • keyboards • toilets
 - faucets and sinks • touch screens
 - and more

STAFF HYGIENE

- Cosmosphere staff/volunteers will follow appropriate hand washing protocol to wash hands frequently and/or use hand sanitizer when soap and water are not available

STAFF + VISITOR HEALTH

- We ask that visitors and Cosmosphere staff/volunteers please stay at home if they are sick or not feeling well
- Staff/volunteers who have sore throat, nasal congestion, cough, a temperature in excess of 99 degrees, body aches, etc., will be required to stay at home

THANK YOU!

Thank you for your support of the Cosmosphere, as we follow best practices to keep all visitors, staff and volunteers safe!

Thank you for letting us be Your Safe Place for Space!

COSMOSPHERE
 INTERNATIONAL SPACE CENTER
 1000 S. MAIN ST. HUTCHINSON, KS 67501

An infographic on health safety the Kansas Cosmosphere created and posted throughout its building.

cleaned very frequently.”

As for the reaction, she says, “We have received lots of positive remarks from patrons that they are glad we are open and that they appreciate all the new protocols to keep people safe.”

Wait and see

However, for the most part, GS theaters and their host facilities seem to be in no rush to reopen, even in areas, like Texas, that have officially permitted businesses to open their doors. In the early days of the crisis, many museums initially predicted reopening dates only a few weeks off, and some subsequently pushed those dates back once or twice. But now virtually all are simply saying that they will be closed until further notice. At press time, the **Gulf Coast Exploreum Science Center** in Mobile, AL; **The Henry Ford** complex in Dearborn, MI; Ohio’s **COSI Columbus**; the **Science Museum of Virginia** in Richmond; and **Hemisferic** in Valencia, Spain, were the only institutions officially stating that they would open in June or July.

Several museums sent surveys to their visitors, asking about their willingness to return, how soon they might visit, which attractions they were most interested in, and which health precautions they’d prefer to see implemented. Others are carefully strategizing their reopening plans, considering which procedures to use, acquiring equipment, signage, and supplies, and beginning the process of training staff.

Berend Reijnhoudt, president of **Omniversum**, a standalone commercial IMAX Dome in the Hague, Netherlands, is planning to open at end of June. He tells *LF*, “We can have 30 people inside the theater (visitors and staff) from June 1 until July 1, and after July 1 we can go up to 100. We need to maintain 1.5 meters (5 feet) between visitors unless they are living together as a family. So our maximum capacity will be around 90 seats (instead of 296). We will only sell tickets online; no ticket means no admission. We will ask everyone who comes to our door if they have had any symptoms...of COVID-19. We will have a limited selection at concessions, and will set up a terrace and bar outside. There will be a single direction of travel through the theater, and we will let people

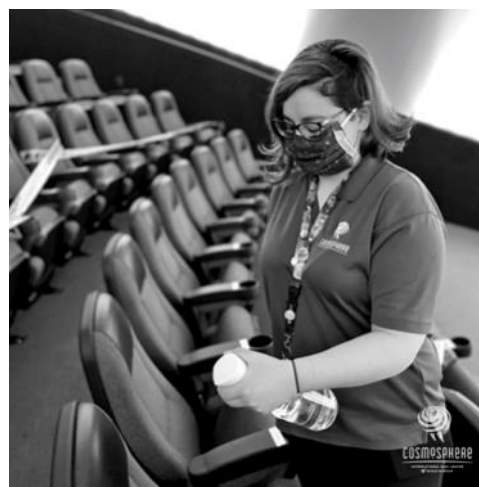
out through the emergency exits, which we will make look friendlier than they are now.”

Manos Kitsonas, technical director of the **Eugenides Planetarium** in Athens, Greece, says that his facility will be taking similar precautions, as does **Loles Ballester** at **Hemisferic**, which is part of Valencia’s **Ciudad De Las Artes Y De Las Ciencias**. A maximum of 42 guests will be permitted in the 306-seat IMAX Dome theater. Guests will wear masks and be offered hand sanitizer, and staff will wear masks and latex gloves. Headsets, previously offered for alternate language versions, will no longer be provided, and 3D glasses will be specially cleaned and sanitized. (See also *Paul Fraser’s article on using UV light for sanitizing 3D glasses on page 2*.)

Drive-ins are back

In the late 1950s and early 1960s, there were more than 4,000 drive-in movie theaters in the US, but their numbers began to decline in the 1970s, and the total today stands at about 325, according to the database at driveinmovie.com. However, in light of the natural social distancing that drive-ins provide, interest in the concept has grown during the coronavirus outbreak. That interest has taken many forms.

- The **88 Drive-in** in Commerce City, CO, near Denver, celebrated Memorial Day with a one-time screening of *In Saturn’s Rings* and *Space Next*, both distributed by **BIG & Digital**.
- Milwaukee, WI-based chain **Marcus Theatres Corporation** has installed projection screens on the exterior walls of at least two of its multiplexes so it can offer drive-in films to customers in the parking lots. No screenings had been announced as this issue went to press.
- The **Penn Cinema** chain in Pennsylvania has also announced a drive-in program, priced at \$35 per vehicle for double features, but with no further details on locations, dates, or titles.
- In early May, the **Tribeca Film Festival** announced that it was partnering with **Imax Corporation** and AT&T to present Tribeca Drive-In, “an all-new drive-in entertainment series that will take place this summer at drive-in theaters



Sanitizing chairs in the Cosmosphere’s digital dome.

and other exclusive venues nationwide.” Imax’s role includes using its DMR process to enhance the films’ image and sound quality, and collaborating with Tribeca “to curate the program, drawing from its rich library of IMAX content.” The program is scheduled to start on June 25. No locations or film titles had been announced at press time.

But perhaps the most innovative drive-in to emerge in the coronavirus crisis is Autokino at the Technik Museum Speyer in Germany. The museum, which hosts a (still closed) 330-seat IMAX Dome theater, has set up a 33x18.5-foot (10x5.6-meter) LED screen in a parking lot with space for 175 vehicles. Unlike projection-based drive-ins, which can only provide adequate images well after sunset, the LED screen, with a light output of 5,500 nits (about 1,600 foot-Lamberts), can operate in full daylight.

The museum’s **Michael Einkörn** says that a low-power FM transmitter provides audio through the customers’ car radios, adding that “[sound] quality is brilliant, absolutely no problems.” The museum is renting the LED panel and FM transmitter from a local event services company that it has worked with for years for about €25,000 (\$27,000) a month, including technicians, about a quarter of the usual rate.

Working with a local cinema film booker, Einkörn has programmed the Autokino with popular Hollywood films such as

(see COVID on page 12)

(from **COVID** on page 11)

Back to the Future, *Knives Out*, and *Spider-Man: Far from Home*, but no GS titles. He also partnered with a local radio station to offer stand-up comedians, who perform live in front of the screen while being captured with three cameras. He comments, "These shows were all sold out, a big success. You make less money with the comedians (they cost a lot) than with films, but as a marketing tool, they are great."

The shows started on April 30, with up to three screenings per day on weekends, starting at 1 p.m. and running until after midnight. Many shows sold out in the first few weeks, and now weekend shows draw about 100 vehicles on average. The price is €24 (\$26.36) per car, about the same price as two regular adult movie tickets.

Einkörn explains, "We wanted to 'be there' for our customers, visitors, and members, which is why we decided to do Autokino. We chose a fair price to send the message, "Hey, the museum is doing something great for me and my family." We wanted to show that the museum is family-friendly in order to bring them back as regular visitors after coronavirus." He has extended the program through June.

Tenet and Hollywood films

As we reported in April, the Hollywood film slate has been thrown into turmoil by the crisis, with most March through July releases postponed, in some cases by as

much as a year. However, **Warner Bros.** and director **Christopher Nolan** have insisted for months that *Tenet*, filmed largely with IMAX 15/65 film cameras, will stick to its planned July 17 date. CEO **Richard Gelfond** and other Imax officials have stated that the company is already working on its part of the release. That would normally include striking a few dozen 15/70 prints and readying a corresponding number of multiplex IMAX film projectors that haven't been used since Nolan's *Dunkirk* left screens in the summer of 2017.

However, although the second trailer for *Tenet* concludes with a one-second card stating, "In theaters and special engagements in 70mm, 35mm and IMAX film," there has been no official word from Imax or WB regarding the number of 15/70 bookings there will be. Sources tell *LFX* that preparations are under way, but suspect the number of 15/70 bookings will be lower than the 40 or so that Nolan's most recent films have commanded.

Some industry observers have noticed that, unlike the first trailer, the new trailer includes no release date, surmising this could be a sign that the release will be delayed. Although a more likely explanation may be that it provides the studio with more flexibility, Warner will have its hands full if it chooses to postpone *Tenet*. The studio has three more tentpole features that would have to be shifted: *Won-*

der Woman 1984, currently set for Aug. 14, *Godzilla vs. Kong* (Nov. 20), and *Dune* (Dec. 18). If *Tenet* is delayed, it would most likely move to *Wonder Woman 1984*'s slot, pushing that title into October or later, where it will have to contend with Marvel's *Black Widow*, James Bond in *No Time to Die*, and *Top Gun: Maverick*.

Imax's Gelfond has been quite visible on the subject of reopening theaters, giving interviews to several media outlets. In the April 30 conference call following the company's Q1 financial report, he said he expected theaters in China to reopen in June, with the rest of the world following in July and August. Although social distancing procedures will reduce theater capacities, he believes that "our core audience, the younger fanboys and fangirls that most value an opening weekend blockbuster in IMAX, [will] be the first to resume such experiential activities as movie going."

Pointing out that multiplex attendance averages out to 15–20% of capacity, and that of IMAX screens runs at about 50%, Gelfond said that Imax will take its biggest hit on opening weekends. Therefore, the company's marketing challenge under social distancing rules will be to "move people from Saturday night, by way of example, to Tuesday night or Tuesday afternoon. Given the brand association between Chris Nolan and Imax, I actually think that's likely to happen."



Autokino at the Technik Museum in Speyer, Germany, uses an 33-foot LED screen and can accommodate 175 vehicles.

Technik Museum Speyer

Impact on the GS community

The closures have affected all organizations, but zoos, aquariums, and other venues with live animals are in a more difficult situation than most museums. A case in point is the **Tennessee Aquarium**. A May 17 article in the *Chattanooga Times Free Press* quoted its president and CEO, **Keith Sanford**. "The penguins have to stay at 43 degrees, and the lemurs have to stay at 80. We're not like [Chattanooga's] Hunter [Museum of Art] in that they can shut the building down and turn utilities off."

Although the aquarium had \$5 million in cash reserves, with expenditures of \$400,000 a week and almost no income, half of that fund is now gone. Sanford had hoped to pay down the \$17 million debt incurred for new construction, including the IMAX theater, within seven years,

"which was going to be my legacy before I retired. We're not going to be doing that."

Twelve original GS films were set to open in 2020 when theaters closed in March. So far, only *Train Time* from **The Stephen Low Company** has a new release date: July 1, although producer **Pietro Serapiglia** admits there are no bookings on that date "for now." Producers and distributors are holding to the original dates for 2021 releases and beyond, but no one can say with any certainty when theaters will reopen or which films they will show when they do.

The GS community may take some small comfort from the fact that its situation is, in certain respects, better than that of the Hollywood studios and multiplex chains. GS films are evergreen and generally don't get wide day-and-date simultaneous releases that require massive national

or international marketing campaigns. They also have active lives measured in years, not weeks. Virtually all members of the GS industry will see substantially reduced income in 2020, but once life begins to return to normal, perhaps sometime in 2021, the public will become more comfortable with going back to museums and GS theaters, the films that were delayed will garner bookings, and the world will continue turning on its axis.

In the meantime, we will all have to continue living with the inconvenience of "shelter in place," the pain of reduced income, the worries about the health of our families and friends, and the uncertainty of when things will start to get back to normal.

But as more than one person we have spoken to during this crisis has said, we *will* get through it.

(from **KOSTER** on page 7)

about the keys to success, "trust is the glue that holds together all other issues during negotiations."

Another excerpt from "Nonprofit Mergers" was strongly exemplified by GSTA-LFCA unification: "The question of whether to merge, with whom, when, and under what conditions, is a quintessentially governance issue.... It offers one of the clearest calls for board leadership and the strongest appeals for board responsibility that a nonprofit board is likely to face."

In today's increasingly complex and troubled world, the role of nonprofits to maximize the external dividends from all their investments has never been more important. As Richard Barker cited in his 2001 book, *The Nature of Leadership*, Aristotle viewed leadership as the harmonious pursuit of positive consequences in the world.

Acknowledgments

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work and her enthusiasm to exchange recollections for this article. Our duties in Tokyo and Osaka gave me a profoundly deeper reverence for Japan's distinctive interpersonal culture.



Kelly Germain and Kazuyo Takehara at the GSTA's 2002 Mid-Winter Meeting in Valencia. People in the background include Glenn Shaver, Patricia Brandino, James Hyder, and Emlyn Koster.

Looking back to before 2008, I gratefully recall an energetic frequency of discussions and action planning with **Mary Nucci** and **Ben Shedd** around the greater educational potential of giant-screen expe-

riences. In particular, this article recalls with great appreciation the partnership of the GSTA and LFCA boards at a critical time in the history of the giant-screen profession. Merging two associations was a meaningful journey that made everyone soar. The contributions of the late **Jonathan Barker** and the late **LeRoy London** endure in our memories.

I thank Kelly Germain, Mary Nucci, Tammy Seldon and Kazuyo Takehara for reviewing a pre-final version of this article.

Emlyn Koster, PhD, has been the CEO of four nature and science museums in Canada and the US. His involvement in the ISTC, GSTA and GSTA-LFCA unification spanned from 1993 to 2009, and included GSTA's board presidency in 2005. Elected board president of the Geological Association of Canada in 1996 and honored by the Faculty of Science at Canada's University of Ottawa with its alumni of excellence award in 2019, he is an adjunct professor in Marine, Earth and Atmospheric Sciences at North Carolina State University. His extensive publications lately infuse the largest challenges confronting the Earth and all of its life. He can be reached at koster.emlyn@gmail.com.

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THE BIZ

GSCA cancels Chicago conference

The **Giant Screen Cinema Association** announced on May 27 that it was canceling its 2020 conference, originally set for Sept. 21–24 in Chicago, and was planning to hold a virtual meeting in its place. The association's board made the decision based on a member survey, conversations with industry stakeholders, and "the likelihood that large gatherings may not be permitted" in September.

GSCA staff is in the process of planning the virtual meeting, dates and details of which will be announced as they are confirmed. For more information, and to volunteer to help with the virtual event, visit giantscreencinema.com.

Imax posts Q1 results

On April 30, **Imax Corporation** reported its financial result for the first quarter ending March 31, 2020. The company posted a loss of \$49.9 million (–\$0.82 per diluted share) on revenues of \$34.9 million, compared to a profit of \$8.3 million (–\$0.13 per diluted share) on revenues of \$80.2 million in the first three months of 2019. First quarter non-GAAP adjusted net loss attributable to common shareholders was \$28.7 million, or –\$0.48 per diluted share in 2020, compared to –\$0.18 in 2019's Q1.

In addition to lost income from the closure of virtually all IMAX theaters, the company also posted a loss of \$10.2 million "provision for credit losses on its theater receivables" because of the pandemic, and a deferred income tax charge of \$19.7 million.

Imax signed deals for 15 new theater systems and installed 12 IMAX theaters in the first quarter, bringing the world total of IMAX screens as of March 31, 2020, to 1,616, up from 1,514 one year earlier.

In a conference call, CEO **Richard Gelfond** said that, with \$90 million in cash and \$300 million in a revolving credit facility, "we're confident in our ability to operate through an extended business shut down and a zero-revenue environment." With cost cutting, the company is spending about \$10 million per month.

He said that Imax's unique position in Hollywood enables it to "take an active role in shaping how the entertainment industry emerges from this crisis," adding that "we're accelerating the development of a comprehensive direct-to-consumer strategy to build on the strength of our brand," such as the IMAX Enhanced format for home video systems. (See item in *The Biz*.)

Gelfond pointed out that its large footprint in China gives it the experience to better manage the reopening of its theaters elsewhere in the world. When cinemas in China begin to reopen, which could happen as early as June, Imax will have a large slate of films ready to release, including many titles that had been scheduled for the week of Chinese New Year in January.

(For more of Gelfond's comments about the effect of the pandemic on IMAX theaters, see the article on the coronavirus starting on page 1.)

Des Moines museum sues insurer

In June 2018, two major thunderstorms hit the **Science Center of Iowa** in Des Moines, doing significant damage to the screen and 15/70 film projector in the center's 222-seat IMAX Dome theater (see *Shorts, Summer 2018*). Nearly two years later, the theater has not reopened and the science center is suing its insurance company, alleging that the Philadelphia Insurance Company used a "sham" expert report to avoid paying for repairs to the theater, according to a news item in the *Des Moines Register*. The suit claims that Philadelphia misdiagnosed the cause of the damage, attempted to reduce the amount of the claims it owed, and refused to mediate with the science center.

TEA sets 2021 meeting, April 8–10

The **Themed Entertainment Association**, which previously canceled its July conference, will honor the 2020 Thea Awards recipients with digital Thea Case Studies, a series of ticketed online events, details of which will be announced soon. Refunds for the 2020 conference will start being processed in June.

TEA will hold its 2021 Summit and Gala live and in-person, April 8–10, 2021, at Disneyland in Anaheim, CA. Nominations for the 2021 Thea Awards will open soon. Registration for the Summit will begin at the end of 2020. For more information visit teaconnect.org.

Benson made VP at TN Aquarium

Thom Benson has been appointed vice president and chief communications and marketing officer by the **Tennessee Aquarium** in Chattanooga. He had been in the position on an interim basis, following the departure of longtime VP **Cindy Todd**, who left the aquarium in January.



Thom Benson

Benson has worked at the aquarium since 2006, after serving as volunteer SCUBA diver for years before that. As communications manager, he helped with the openings of several major exhibits and the upgrading of the IMAX theater to laser projection system in 2016.

Before joining the aquarium staff, Benson was an on-air meteorologist and reporter for Chattanooga's NBC affiliate for 12 years, where he often reported on science and environmental issues.

Sony adds IMAX Enhanced titles

Sony Pictures Entertainment has announced that it will release hundreds of new movies mastered for Sony Enhanced to home video formats in the coming years.

First announced two years ago (see *Shorts, September 2018*) IMAX Enhanced is a certification standard for home audio and video equipment and content that reportedly provides noise reduction to enhance the video image and uses technology from **DTS** to optimize the custom IMAX theatrical sound mix for home theater systems.

Participating hardware makers include Sony, Denon, TCL, and MacIntosh.